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Thesis
1939
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THE UNIVERSITY OF ALBERTA

VOCATIONAL GUIDANCE FOR HIGH SCHOOL STUDENTS
IN ALBERTA

A DISSERTATION
SUBMITTED TO THE GRADUATE FACULTY
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
MASTER OF ARTS

DEPARTMENT OF EDUCATION

BY

DOROTHY ELIZABETH DEAKIN

EDMONTON, ALBERTA

MAY, 1939.

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1914

1915

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2. The Journal of the American Dental Association, published weekly, is the largest and most influential of the dental journals in this country. It is published by the American Dental Association, 515 North Dearborn Street, Chicago, Ill.
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6. The Journal of the American Optometric Association, published weekly, is the largest and most influential of the optometric journals in this country. It is published by the American Optometric Association, 515 North Dearborn Street, Chicago, Ill.

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INTRODUCTION

"Blessed is he that hath found his work. Let him ask no other blessedness" - Carlyle.

Meaning of the Term "Vocational Guidance"

Vocational guidance has been defined as the giving of information, assistance and advice in choosing a career, preparing for it, entering it and progressing in it. If you will consider all the implications in this definition you will note that it contains in condensed form the very essence of what we are learning to realize as one of the chief functions of education.

Principles Underlying the Choice of a Vocation

In the wise choice of a vocation there are three broad factors to be considered:

(1) The choice of an occupation must be based on an accurate knowledge of a number of characteristics and conditions the most important of which are:

- (a) intelligence
- (b) school marks
- (c) age upon reaching present grade
- (d) special abilities and disabilities
- (e) personal likes and dislikes along occupational lines
- (f) character and personality traits

- (g) health and physical characteristics
- (h) home environment
- (i) family finance
- (j) parental wishes

Thus, as you see, the first step in choosing a career constitutes a thoroughgoing self-analysis.

(2) Secondly comes a detailed analysis of the actual jobs themselves. Knowledge of the requirements, conditions of success, advantages and disadvantages, compensations, opportunities and prospects in different lines of work is essential here.

(3) The third and final factor combines these two analyses. By comparing the available knowledge concerning himself with the available knowledge concerning the occupations the student will discover the type of work in which there is the greatest opportunity of his being successful and satisfied.

Need for Vocational Guidance

Every human being has a right to a vocation in which he shall find joy, adequate self-expression and an opportunity for worthy service. It is our duty to see that every child, boy or girl, is provided with the guidance and information which will fit him to exercise that right. Too many of us know the daily bitterness of distasteful labor, and must turn for our pleasures in life to the few hours of home comfort or recreation at the end of a day that should

have been filled with the richer joys earned only by labor at a loved task skilfully performed. What slavery is worse than being chained to a hated routine! Many a man wastes a lifetime in such bondage, looking forward and saving towards the time when he can retire and do as he pleases, only to find that the shackled years have so eaten into his spirit that he can no longer savor the pleasure he had looked forward to. The pity is that much of this industrial maladjustment is unnecessary. One man's meat is another man's poison, and we are coming to see that it is possible to do a great deal more than we have done hitherto to lessen the number of vocational misfits by fitting the worker to his work.

The choice of an occupation is perhaps the most important decision the individual is called upon to make throughout his entire life. Work occupies one half of the waking time of most individuals and is basic to all other activities in life. Mr. Micawber is a classic instance of the fact that vocational success is necessary to success in other activities. By his own confession he was a failure as a worker, how fared his life in general? Did he succeed in his home relationships? Was he a good citizen? Were his children given a fair chance to succeed themselves? Was Micawber really happy? Dickens gives us a true picture, and it is repeated today in the lives of unguided and misguided workers. No real life can be lived on the basis of vocational disappointment and failure. The vocation is a fundamental without which most other enterprises in life would fail.

Although the importance and need for vocational guidance is self-evident, the adoption of a province-wide plan and all that it implies seems a long way off, partly because of the great expenditure popularly associated with such a plan, and partly because either few people are aware of the need or deeply concerned about the thousands of children who are being turned out of our schools annually to seek employment in the industrial world. In the meantime, therefore, we can only survey the vocational program to discover some part of it which will be expedient and economically feasible, and we find that the best means at our command is to provide each and every student with extensive, detailed, and reliable occupational information.

The purpose of this study is to inform young Canadians, particularly Albertans, regarding the nature and requirements of occupations open to boys and girls leaving school during the teen age. The immediate aim is, however, to create an interest in the study of occupations and to accustom young people to a way of thinking about work so that they will know better how to make a decision in selecting vocations and how to fit themselves into the work they choose. It is also hoped that the study may be of value to parents and teachers in giving information about the occupational world.

In preparing this study generous assistance has been received from men active in each type of occupation discussed and from many school teachers throughout Alberta who were kind

enough to arrange for interviews. All of this assistance has been greatly appreciated.

CHAPTER I

ORGANIZATION OF DATA

In obtaining the occupational information for this study every attempt was made to be as scientific as possible, to present students and parents alike with actual facts not mere biased opinions and beliefs. A questionnaire of the types cited below has been extensively used as a means of gathering data and although it has very obvious limitations, it is the only method whereby research of this nature may be carried on to any appreciable extent. In order to improve the efficiency of the questionnaire one was sent to four different people in each occupation so that the answers might be checked one against the others and only the most reliable information retained. In the majority of cases we were able to obtain statements from individuals who have been recognized by their fellow-workers as outstanding in their occupation, men and women who are actively engaged in the organizations related to their work. Once again our purpose in so doing was to make our report as complete and as reliable as circumstances would allow.

Information from the questionnaires has been supplemented in a few occupations by material obtained from "The Choice of an Occupation" by Crawford and Clements, "Students and Occupations" by Williamson, Guidance Leaflets, and a series of articles which ran in The Toronto Globe. Most of the occupational leaflets in circulation at present are published in the United States and for that reason are of little use to students in Alberta schools. A few books, however, are

suggested for reading, these you will find mentioned in a later chapter.

We quote the questionnaire in full in the hope that it may perhaps serve as a guide to a student who wishes information on some vocation not included in this book. A note of warning must, however, be sounded. See that you obtain your information from only the most trustworthy of sources otherwise your data will be worse than useless for it will not be authentic and may ultimately cause you a great deal of inconvenience and difficulty.

Questionnaire

Qualifications - (1) Which High School course would serve as the most suitable basis for this line of work? (University entrance, Normal entrance).

(2) How many years of High School training is absolutely necessary?

(3) What further education, either of a general or special nature, would you advise in view of the fact that advancement is desired?

(4) What personality traits are especially desirable for this line of work?

(5) What personality traits would be very detrimental for this line of work?

(6) What character traits would be desirable?

(7) What character traits would be detrimental?

(8) What physical characteristics would be necessary?

- (9) What physical characteristics would be detrimental?
- (10) Along what lines is special ability or special training necessary in this occupation?
- (11) Between what years of age is the individual most likely to be admitted into the occupation? Give the upper and lower age limits.
- (12) To what extent is the number entering this field regulated by means of standards, tests, examinations, etc.?
- (13) What recommendations are necessary for those desiring admission into the field?

Specific Training - (1) Length of course.

- (2) Nature of course taken during training.
- (3) Where may training be best obtained?
- (4) Estimate the availability of training, i.e. distance from home where training along these lines may be obtained?
- (5) Approximate cost of training,

Fees

Board

Books

Transportation

Tools, apparatus, etc.

- (6) Flexibility of training, i.e. where else besides in this particular occupation might this type of training be utilized so that the individual need not suffer too much from unemployment?
- (7) In the case of apprenticeship give the nature of the course, the length of the course, the conditions under which

the individual must work and the remuneration he receives.

(8) Outline any other method whereby the individual may be trained in this field.

(9) What assistance, scholarships or grants are available for young people whose parents are unable to bear the full cost of training?

Remuneration - (1) What is the usual initial salary?

(2) Estimate the range in salary to be found in this occupation.

(3) What is the usual salary given to one with accepted training and a reasonable amount of experience?

(4) How long does it take to reach a modest home-supporting status?

(5) Is there a definite rate of increase in salary?

(6) If so give the details.

(7) To what extent do Trade Unions, Professional Societies, etc., influence wages, salaries or remuneration?

(8) What provision is made so that the individual may be sure of collecting his salary, wages or remuneration?

(9) What is the method of payment, i.e., is he paid on a commission basis, or a salary basis or both?

Give details.

(10) What are the special demands made upon his wages, salary or remuneration by society?

Duties - (1) Outline briefly the nature of the work the individual is required to perform in this occupation.

(2) Do duties involve dealing chiefly with ideas?

men?

things?

(3) How does the nature of this work change as one advances to the more superior positions?

(4) Are there duties apart from those pertaining directly to the position? If so what are they?

(5) Can the work of the individual be observed or is it always merged in the accomplishment of others.

(6) Do the duties in this field change or are they the same day in and day out?

Opportunities - (1) After training or graduation where may the individual expect to find employment, i.e. in what fields is this type of training utilized?

(2) What are the individual's chances of obtaining employment in these various fields, i.e. what is the ratio of supply to demand in each of the fields enumerated under (1)?

(3) Estimate the need for specialists in these fields.

(4) Is the field new or old?

(5) Is this particular occupation in a state of growth or is it in retrograde?

(6) When (geographically) are the greatest number of opportunities to be found in this occupation?

(7) To whom would the individuals desiring employment in this type of work submit their applications or to whom would they go for a personal interview?

Hours - (1) How long is a working day?

(2) Between what hours would the individual be required to work?

(3) Are the working hours regular? fairly regular? very irregular?

(4) Is the individual paid for overtime?

If so at what rate is he paid for overtime?

(5) Is there any limitation on the amount of overtime he is allowed? If so what is it?

(6) How many days a week is the individual required to work?

(7) Does the individual receive public holidays?

(8) How long is he allowed for his annual holiday?

(9) Does he receive any pay during holidays?

(10) Estimate the amount of leisure time per day.

Advancement - (1) Is there any uniform rate of advancement?

(2) If so state how it operates.

(3) Is advancement based primarily upon merit?

(4) Is advancement based primarily upon seniority?

(5) To what extent is advancement contingent upon extra training?

(6) Estimate the individual's chances for advancement in this field.

Relative Security of Position - (1) Does the presence of unions, societies, etc. in any way regulate the number of members in the vocation, calling, profession or occupation so that there will not be an over supply?

(2) If so by what means is the number of members regulated?

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- (3) Are there any unions to uphold the rights of employees in cases of dispute with employer?
- (4) To what extent is collective bargaining allowed?
- (5) Are changes in government, management, etc. very likely to affect the position?

Insurance and Pension Schemes - (1) Is there any retiring age in force?

- (2) Is it actually enforced?
- (3) What is the retiring age?
- (4) Is there any pension scheme?
- (5) If so state conditions under which the individual may receive said pension.

- (6) How much is the pension?
- (7) Is there any insurance in case of accident?

In case of illness? In case of death?

- (8) How does the employer contribute to each of these?
- (9) What are the benefits he receives in each case?
- (10) Do wages continue when the individual is off due to illness or accident?
- (11) How many days with pay is he allowed?

Special Advantages and Disadvantages - (1) What opportunities has the individual for profitable and stimulating pursuits in his leisure time?

- (2) Is there any inner satisfaction resulting from this type of employment?
- (3) What is the social importance of this type of work, i.e.

what contributions does this type of work make to society?

(4) What social recognition is given to the work?

(5) Is one likely to have congenial associates in this occupation?

(6) Is this type of occupation characterized by monotony, repetition, etc. or is there free scope for originality and initiative?

(7) Does this work entail a great deal of travelling or many absences from home?

(8) Are there opportunities for self-development within the vocation, profession or occupation?

(9) Is the individual permitted complete freedom in respect to citizenship privileges, social privileges, political privileges, religious privileges, etc.?

(10) What is the effect of this type of work upon health, nerves, etc.?

It is to be noted that this is a "blanket" questionnaire, i.e., it is designed to fit all occupations and as a result you will find many questions which cannot be answered for the specific type of employment in which you are interested. Do not let this worry you but try to obtain answers for as many questions as you can so that your knowledge of the calling will be as comprehensive as possible.

CHAPTER II

CHOOSING A LIFEWORK

The Consideration of a Few Factors which Should Influence One's Choice.

With our present hit-or-miss methods we know that the majority of young workers choose their first jobs through friends or relations, or through blindly answering advertisements, and that they are guided by the wage offered, the easiness of the work, its nearness to their homes, fancied social advantages - anything but interest in, or fitness for the work itself, or thought of future opportunity. There is no question that the waste of time, the mental effect of false starts and failures, the dangerous habits of idleness and irresponsibility engendered, contribute tremendously to the general social unrest. It is fair to assume that if workers would use a little more judgment in choosing their lifework there would be a good deal less of this social unrest. In the present section we will consider a few factors which should help to offset this state of affairs.

Personal Satisfaction to be Derived from One's Lifework -

In the choice of an occupation it is the personal satisfaction which one will derive from his lifework that becomes of paramount importance. Whether one is essentially interested in people, ideas or things, whether he is an individualist or a teamworker, whether he has a keen interest in making or saving money or would enjoy wealth chiefly because of the things it would enable him to do, these are all factors

worth taking into account from the very start of one's occupational thinking. They may not directly point the way to any particular occupation but they may throw some light on the most important question of all in making a decision namely, "What career is likely to yield me the greatest return in total satisfaction from my life efforts?"

Whatever a man or woman most definitely wants to do is his or her best guide to an occupational choice, because even if they fail to realize their expectations, they should at least find satisfaction in the nature of their work. The greatest disappointments are felt by those who, for the sake of immediate considerations, turn their backs on any real preference and who thereafter find neither an absorbing interest nor compensating material advantages in the alternate field which they have elected for some seemingly "practical" reason.

Remuneration.-

Remuneration for work is a most important factor in the choice of a career but it is by no means the essential guide in selection. The satisfaction and interest involved in performing a task are dominant influences in choice. As long as a living wage can be expected, satisfaction in life-work far outweighs the remuneration values in achievement. Real success is derived from genuine interest and not the pay envelope. Dead alley temptations must also be avoided. Routine and uneducational tasks are frequently undertaken because they yield more pay at the beginning but as they rarely offer any opportunities for future advancement, this state of

affairs will not continue for any length of time. Boys and girls should not allow themselves to overlook this fact and should be persuaded to use such opportunities to orient themselves towards more satisfactory future positions.

Cost of and Opportunities for Training.-

After the choice of an occupation has been made, a course of training must be planned. A thorough preparation is the best guarantee for a successful career. The length of time and cost involved enlarges with the complexity of the vocation. A few weeks of training will enable a boy or girl to run a machine in a factory. A stenographic course may be completed in less than a year. An apprenticeship or a skilled trade training may require from two to five years. It is not unusual for a medical student to spend from eight to ten years at a cost of from \$5,000. to \$15,000. before he finally begins to practice for himself.

Some firms such as the General Motors conduct their own training schools and, as with the apprenticeship system in the railroads and certain trades, it is possible to earn some money while in training. The Technical School in Edmonton and the Calgary Institute of Technology and Art provide the necessary preparation for many vocations. Information as to the exact courses offered may be obtained by writing for their calendars. Prospective farmers may attend one of the various Agricultural Colleges throughout the province. Those who have decided on business have a wide range of choice. They may enter business directly upon

leaving high school, they may take a Business College course or they may enroll in the course at the University leading to the Bachelor of Commerce degree. Most of the Professional occupations, of course, such as medicine, engineering, law and high school teaching demand a University training and involve a considerable amount of expense.

A consideration of the cost of training together with the chances of being able to complete the necessary course of instruction are such obvious items in the choice of a lifework that it hardly seems necessary to mention them. Any student who finds that his means are not sufficient should read "How to Find and Follow Your Career", by J. Reilly. His suggestions may help overcome difficulties that seem almost insurmountable at the present time. In many occupations special assistance in the way of bursaries, scholarships, loans, etc., is given to outstanding students. Find out if such is the case in the work of your choice, secure all the details and then concentrate on your objective.

Social Benefit and Benefit to the Individual.-

For a wise choice of occupation there should be a coincidence of five things: interest, ability, opportunity, social benefit and benefit to the individual himself.

Learning the needs of the world of occupations is an important step in the vocational progress of the individual. Usually most choices are limited to four or five vocations such as lawyer, engineer, doctor, aviator, for boys and stenographer, nurse, or teacher for girls. But there is

really no reason why young people should limit their choices to such a narrow scope, except that perhaps they are really unaware of the vast number of opportunities that lie open to them. According to the census report the gainfully employed are divided into some four hundred occupational groups. Look over the latest census report and see if you can't find three or four occupations that really appeal to you. While you are doing this notice also the number, both employed and unemployed in each occupation. These figures will give you a rough estimate of occupational trends and will help direct you into vocations that have a large demand and a comparatively small supply, vocations that are growing rather than declining, and consequently offer the greatest opportunities for advancement.

In the last analysis, however, it is not what the work itself is worth to the world, but rather how it will further this or that other life-value to the individual, this should always be the deciding factor in choosing a career. Too many decisions neglect the significance of avocational interests or of other interests outside the strictly vocational field, but these we all readily agree are of vital importance to one's whole development. Such compensating factors as congenial associates, opportunities for stimulating pursuits in one's leisure time, social contacts, contacts with young people, the feeling that in your work you are doing something worthwhile and at the same time actually developing yourself, all these and a great many more have much to do with an

individual's all-round adjustment and, therefore, his occupational effectiveness. He would do well to weigh their significance for him and to choose his lifework accordingly.

Transferability of Training.-

Misfits and maladjustments to work are often traced to inadequacy of training and inability to transfer to another occupation. Longer periods of general education and training with more than one ultimate occupation in mind should be stressed in order to overcome this difficulty which occurs too frequently. It is a fallacy and a grave mistake to believe that a man can and should learn only one vocation. Constant changes in industrial life make it imperative that the individual choose that type of instruction which will qualify him not for just one, but for several different positions. The more things your training prepares you to "turn your hand to" the easier you will find it to adjust yourself to changing conditions in the business world. Of course it must be realized that transferability of training is not always possible, for instance it is said "A printer is always a printer and makes a poor fist at any other line." But on the other hand an individual, who had specialized in commercial art for example, can paint pictures for private sale, practice interior decorating of houses and public buildings, do photographic work, design magazine and newspaper illustrations, or teach commercial art.

In this respect the desirability of a general background training rather than rigid specialization from the

very beginning of training cannot be stressed enough. Specialization occurs in most cases on the job rather than in the training for an occupation.

Many students believe it is a waste of time to study subjects which are not in the direct sequence leading to the job they have chosen. In reality, however, general education is training in versatility. Every salesman knows how good clothes help him to sell, to increase his income. In the same way, every business man knows the economic value of good mental furnishings. "Knowledge", the ancients said, "is power". They might have added that knowledge often has an indirect cash value.

Life on the Job and Life off the Job.-

Naturally when an individual seeks occupational information about some line of work in which he is interested, he will ask about wages, necessary training, opportunities, special advantages and disadvantages and so on. The answers to these questions will tell him something about the actual job itself, and the type of life he will have to lead during his working hours but they will tell him nothing about the type of life he will either have to lead, or be expected to lead after his day's work is finished. In obtaining information relating to "life off the job" you might ask such questions as: How much leisure time will I have each day in order to pursue the things in which I, as an individual, am interested? What opportunities will there be for my own self-development? What social recognition is given to this type of work? Will I be expected to take an active part in the affairs of the community

and am I interested in such work? Will I be permitted complete freedom in respect to citizenship privileges, social privileges, political privileges, religious privileges, etc.? Is there any inner satisfaction resulting from this type of employment?

In so far as possible we have tried to give a picture, not only of life on the job in the various occupations to be discussed later, but also of what we have called for lack of a better name "life off the job." Our purpose in making special note of the question here was to try to draw the student's attention more forcibly to this very important phase of employment than has been done heretofore and perhaps suggest other features of import which might easily be overlooked in the choice of a lifework.

Stumbling Blocks in the Choice of an Occupation.-

In attempting to select a suitable vocation, most students commit certain errors of thinking which prevent wise decisions. Let us consider these fallacies or errors of thinking which cause many unwise choices. They are more easily avoided if recognized and understood. We may know them as: ¹

- (1) The attractiveness of the remote and the glorification of the unusual.
- (2) The white collar illusion.
- (3) The fallacy of the perfect niche.
- (4) The sparkless motor.
- (5) Misreading the signs.

¹Adapted from Williamson - "Students and Occupations" PP - 15.

The first of these is the fact that the
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(6) The fallacy of equal ability.

The student whose judgment is free from the distortions called the attractiveness of the remote and the glorification of the unusual is indeed fortunate. The grass on the other side of the road always seems greener until we have crossed the road. Every type of work has its disagreeable aspects and its dull routine. Another person's work is likely to be no more pleasant than our own, but we, through uncritical envy, tend to clothe our neighbor's work with glamor. No student should choose any type of work merely in the hope of having a meteoric success and a life of ease. The same job may mean brilliant success for one student and certain failure for another.

The tendency to glorify the unusual is a no less common danger. Doctors are seen in the light of their most brilliant operations while no attention is given to the long hours of routine. Enraptured youths believe that all a lawyer does is deliver soul-stirring pleas for the innocent and oppressed. Engineers are thought of as builders of Boulder Dam; but there is only one such to the thousands who do nothing more dramatic than build a post office on Main Street.

Then again some students think of the professions as the only respectable routes to vocational success. These students are the victims of the "white collar illusion." Actually, one need not be a doctor to be well thought of in the community, or practice law to attain financial security. Many persons can be of far greater service to humanity by

selling groceries than removing an appendix. Even if medicine is more dramatic than the retail grocery business, that means nothing unless one has the ability to pass examinations in German, chemistry and a host of other technical subjects. It should be remembered that there is much truth in the contention that one way of life is not necessarily better than another but only different. A good plumber is just as respectable and far happier than an inefficient and poorly paid doctor.

Some students think of themselves as capable of only one type of work. They imagine that there exists somewhere "a perfect niche" for them. In reality, however, it has been found that a few individuals may possess many abilities, and may be able to use these abilities in many types of work. Suppose one has shown skill in re-assembling the family clock. One cannot therefore, conclude that engineering is the only career in which such ability can be used. As a matter of fact that same mechanical dexterity might be used in surgery or dentistry or mechanics or engineering--providing one has the other abilities demanded by these professions. And if one does not possess these other essential aptitudes, no amount of mechanical ingenuity will guarantee a successful professional career in any of these fields.

Perhaps nothing is quite so serious as lack of ambition. Indolent students resemble sparkless motors. A student with average ability but with tremendous ambition and work efficiency is more likely to succeed, in some types of work, than one who has ample ability but no ambition. Of

what value is a twelve-cylinder car without an ignition spark? Of what value is a high I.Q. if one puts it to no constructive use?

What Williamson has called misreading the signs is the mistake made by those who jump to wrong conclusions. A supposed liking for mathematics and science courses and a dislike for English are often judged to be signs pointing straight to a dazzling success as an engineer. The truth is that, in so far as these particular likes and dislikes mean anything occupationally, they indicate equally well some of the qualifications useful to the farmer, engineer, chemist, dentist, architect, mathematician, physician, physicist and psychologist.

The assumption of equal ability for many occupations is another dangerous error in choosing a vocation. It is very comforting to our ego to believe that we are all created equal in ability. What we wish to make clear, however, is not the disheartening aspects of the fallacy of equal ability but rather the encouraging truth of differences of ability. "If the intellectual ox cart cannot reach the White House, neither can the Rolls-Royce negotiate the ox cart trail, which latter, be it remembered, by the way, may lead to no less adventure, success and personal satisfaction." ²

²Williamson - "Students and Occupations".

CHAPTER III.

FURTHER SUGGESTIONS FOR AIDS IN VOCATIONAL GUIDANCE

Recognizing the great need for vocational guidance of some sort, especially in rural communities, and at the same time realizing that a necessary compromise with present school conditions must be made, the following suggestions, gleaned from a number of books, have been gathered together in the hope that they may prove of some value in this work:

(1) The immediate need of adequate library facilities has already been mentioned. Every school should have a shelf of up-to-date books on occupations. The following books are recommended as being particularly suited for Canadian boys and girls:

"Choosing a Lifework" - a series of booklets published by the Ontario Department of Education. Each booklet deals in a very thoroughgoing way with one specific occupation.

"The Engineer" - by John Hays Hammond, President of the American Institute of Mining Engineers.

"The Teacher" - by F.B. Pearson.

"The Newspaperman" - by Talcott Williams.

"The Ministry" - by Charles Lewis Slattery.

"The Advertising Man" - by Earnest Elmo Calkins.

"The Physician" - by John Finney, M.D.

"Trials to Success" contains a collection of occupation articles prepared by distinguished Canadian authorities.

The most extensive occupational study has been carried

on by the Institute of Research, Chicago. They have published monographs on fifty-two occupations and although this series is naturally more useful to students in the United States, Canadian boys and girls may obtain some really valuable information from them.

(2) Interviews may be sought with representative men and women. Most people feel complimented when they are approached for vocational advice so never be afraid to ask for a personal interview. It is well to be prepared to ask intelligent questions, as a good impression often leads to permanent friendships which may prove of value later on.

(3) Vocational talks by representative men and women are also being introduced into many schools. In this respect the co-operation of other interested social agencies of the community such as the Chamber of Commerce, the School Board, Men's Clubs, Women's Clubs, etc., should be sought.

(4) Try-out experiences may be provided in the school by means of such activities as dramatic and debating societies, junior business, art, and work on the school paper. Try-out experiences may also be provided outside the school in part-time, after-school or summer employment. These are perhaps the most valuable self-discovery agencies of all.

(5) Composition periods may be successfully turned into periods for vocational study. Pupils may be encouraged to make enquiries of their own and report their findings either

in oral or written form, for the discussion of their classmates.

(6) Visits may be made to factories and institutions that are in any way connected with the vocations one is studying. If you get the chance to go on such trips do not be satisfied merely to watch. Ask questions. Ask about other things beside wages and salary. Ask about working conditions, about the usefulness of the occupation, whether the trade is overcrowded or not. Find out if the employment is regular or seasonal. And when you do ask about money, find out the lowest as well as the highest salary paid. Try to learn also what other rewards besides money you may expect. Does the occupation give you a chance to express yourself, to help others, to achieve satisfaction in using your own powers, in being skilful. If it does the money is not so important although of course you want to make enough on which to live.

The Co-Operative Parents' Catechism.

In a very able but human little book, "If Parents Only Knew" by Elizabeth Cleveland, we ran across a section for parents.³ Here are some of the questions Miss Cleveland thinks all parents of high school boys and girls should ask themselves:

(1) Am I noting carefully the kinds of activities each of my children engages in when he is free to choose for himself?

(2) Am I giving my children an opportunity to see for

³ Cleveland E. - "If Parents Only Knew " (1929) PP - 89 - 92.

themselves how various kinds of work are performed?

(3) Am I watching for the development of special proficiency in any kind of skill and am I providing the means so that the proficiency may be developed.

(4) Have I talked over with the children the vocations they say they want to practise when they grow up? Have I analysed their reasons for these choices and if so are they sound?

(5) Have I marked preferences and prejudices regarding my children's careers? Am I in danger of hampering their free choices?

(6) Am I giving their choices sympathetic consideration and using them as a stimulus to effort even though I realize they are likely to change?

(7) Are the children developing a sense of responsibility about work, learning not to let play interfere with work, not to shirk, not to "lie down on the job?"

(8) Are they getting a chance to try their hand at sewing, cooking, housework, construction, drawing, tinkering about the house, working with tools, buying and selling?

(9) Have they access to books which will give them assistance?

(10) Am I helping them to plan their school studies with a view to their possible vocational choices?

(11) Have I surveyed the field of occupational opportunities open to them, and considered their fitness for each?

(12) Do I know what training is required for the vocations that seem most promising?

(13) Am I in a position to provide that training?

(14) Is the family atmosphere such as to develop a serious attitude toward choice of a vocation, particularly for girls?

CHAPTER IV.

SCIENTIFIC TESTS.

The second way in which you may gain information about yourself is by means of scientific tests. There are four distinct types of scientific tests widely employed in vocation guidance work. These are intelligence tests, character and personality tests, vocational interest tests and special abilities or special aptitudes tests. Let us survey, briefly, the contributions made by each of the problem of choosing a lifework.

Intelligence Tests.

Mental ability should never be overlooked in choosing a lifework. Tests have been devised which measure this trait with a fair degree of accuracy. Whenever test of general intelligence are used the greatest care must be exercised. No important decisions should be made on the basis of one group test alone. As a general rule, however, a boy or girl with an Intelligence Quotient of less than 105 should not be advised to enter a profession which requires a university training unless he or she is particularly studious and industrious. Then again there are many who, possessing high Intelligence Quotients but never having acquired good study habits, find it impossible to complete a college course.

Your own high school record is an excellent indication of your ability. If you expect to enter a vocation which requires a college education, you should stand in the upper half of your class. Those in the lower half should not consider the occupations which require a great amount of

RECOMMENDED INTELLIGENCE TESTS

Grade	Name of Test	Type		* Cost	Cost of Instruction Manual
Kindergarten	(a) Detroit Kindergarten Tests (b) Rhode Island Intelligence Test (3-6 years)	Individual Individual	Public School Publishing Company.	\$1.00 for 25 \$.50 for 25	\$.04 \$.01
1.	(a) Detroit First Grade Intelligence Test (b) Pintner - Cunningham Primary Mental Test	Group	World Book Company 2126 Prairie Ave, Chicago	\$1.25 for 25	\$.07
2	Detroit Advanced First Grade Intelligence Test	Group			
3-6	Hagerty Intelligence Examination Delta 2	Group	World Book Company 2126 Prairie Ave, Chicago	\$1.25 for 25	\$.06
3-8	(a) National Intelligence Tests (b) Illinois General Intelligence Tests	Group Group	World Book Company 2126 Prairie Ave, Chicago World Book Company	# Scale A \$1.25 for 25 Scale B \$1.25 for 25 3 forms of test \$2.00 for 100 \$.024 per copy 2 forms of test	A \$1.06 B \$1.06 \$.15
5-8	Otis Self-Administering Intelligence Tests Intermediate Examination	Group	World Book Company	\$1.80 for 25	\$.07
9-12	Otis Self-Administering Intelligence Tests Higher Examination	Group	World Book Company	\$1.80 for 25	\$.07
7-12	Terman Group Test of Mental Ability	Group	World Book Company	\$1.25 for 25	\$.07

* Keys and class record sheets will bring up the total cost to two or three cents more
There are two different tests designated Scale A and Scale B, while either may be used alone for a short test the two together constitute a complete test. Scale A contains tests in arithmetic, reasoning, sentence completion, logical selection, synonym-antonym, and symbol digit. Scale B contains tests in computations, information, vocabulary, analogies, and comparison.

abstract thinking, but should confine their attention to callings which deal mostly with concrete things. Such students should be directed towards Technical and Commercial schools instead of being allowed to drift aimlessly along in academic courses which they dislike and which will be of little future use to them.

Table I gives a list of recommended tests for the teacher's use. Parents are advised to put all intelligence testing into the hands of the teacher as an extensive knowledge of psychology is necessary both for the application of the test and the interpretation of results.

It would be highly desirable to have more complete evidence than is yet available as to the intelligence requirements of different occupations. During the Great War intelligence tests were given to all recruits in the American army. From the results the following classification was obtained:

TABLE II
Army Alpha Results

Fryer marks off quite definitely eight occupational levels, as follows:

A 1. Very Superior. - Constitutes highly professional group, such as editors, lawyers, college and high school teachers, engineers. Score 135-212. Represents 4.5% of population.

B 2. Superior. - Professional - journalist, physician, elementary school teacher, insurance salesmen, chemist. Score 105-134. Represents 9% of population.

C 3. High Average. - Technical - stenographer, nurse, wholesale salesman, small merchant, Railroad Clerk.

Score 75-104. Represents 16.5% of population.

C 4. Average. - Skilled - locomotive engineer, telephone operator, policeman, laundryman, plumber, chauffeur.

Score 45-74. Represents 25% of population.

C- 5. Low Average. - Semi-skilled and low skilled - hospital attendant, mason, lumberman, shoemaker, sailor.

Score 25-44. Represents 20% of population.

D 6. Inferior. - Unskilled - fisherman, loader, lifter.

Score 15-24. Represents 15% of population.

D- 7. Very Inferior. - Lowest skilled - laborer - simplest type of work.

Score 0-14. Represents 7% of population.

E 8. Useless. - No occupation.

Score 0-14. Represents 3% of population.

Of course this is a very generalized classification, and therefore this should not be taken too seriously. The graph on the opposite page, showing the great overlap in intelligence for a few occupations, demonstrates conclusively just why it should not be taken too seriously. Taking an example, notice that about half of those engaged in unskilled labor have just as much intelligence as those engaged in such skilled trades as baking and general mechanics for instance. Force of circumstances perhaps or simply lack of opportunity will account for an infinite number of similar instances. Then

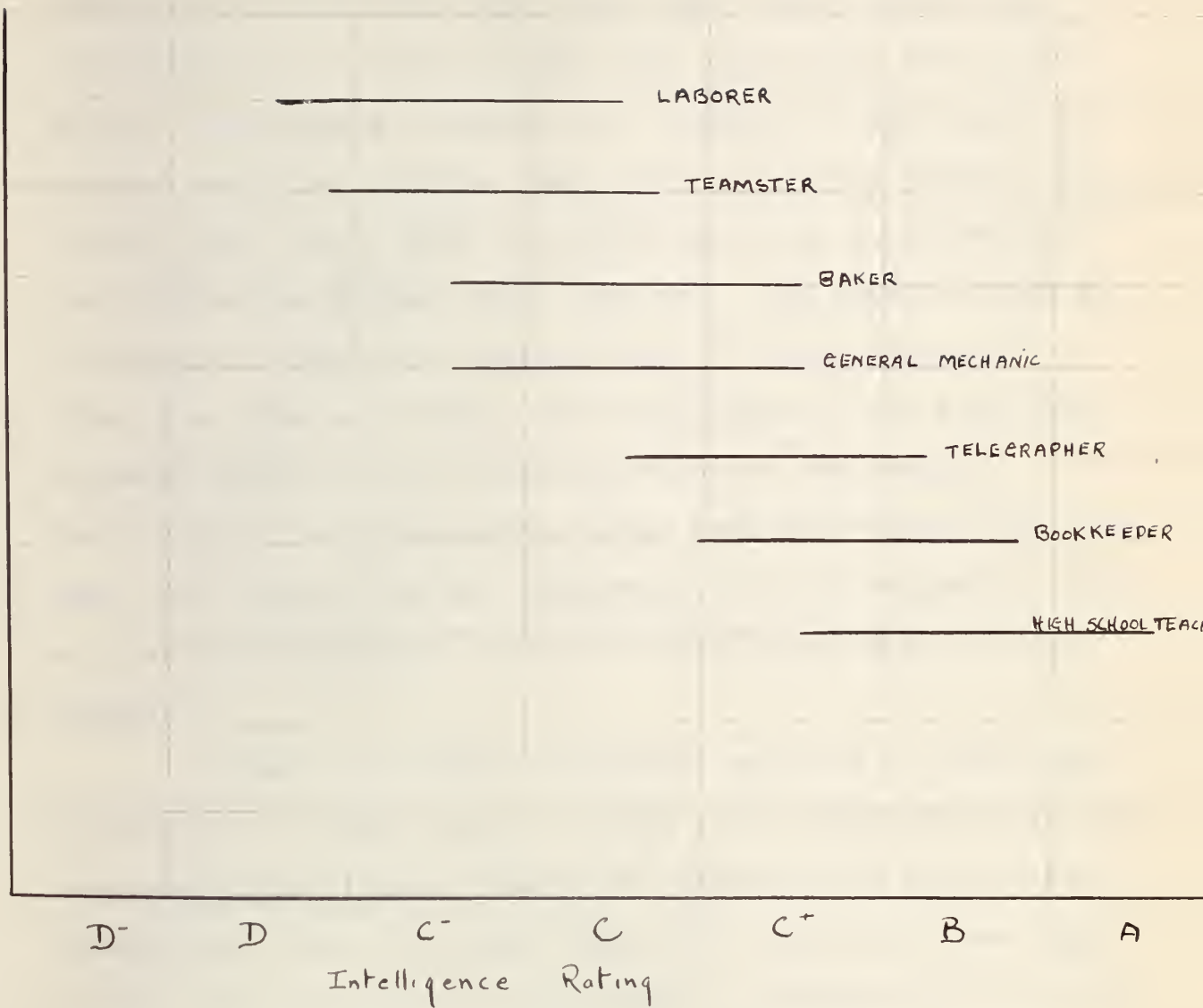


Fig. 1- Showing the great overlap in intelligence for a few occupations.

again notice the great overlap in such occupations as telegraph operator, bookkeeper and school teacher. Special interests and abilities will more than likely account for discrimination in choice within this particular vocational group. Innumerable instances of a parallel nature might be pointed out if we had the time, and you had the patience to pursue them, but I think that with these few illustrations our purpose has already been achieved. The point we wish to illustrate is that the unsuitability of intelligence is often the cause of misfits and maladjustments and will inevitably result in the dissatisfaction of the worker. Unsuitability of intelligence works both ways--those with too much intelligence for the requirements of the occupation will be just as dissatisfied as those whose intelligence is not enough.

There is already sufficient evidence of individual differences in intelligence to make it an important factor in determining individual fitness or unfitness for any specific occupation. But at the same time, one should not lose sight of the fact that general intelligence, important as it may be, is only one of several factors to be considered. Special aptitudes, and other qualities of personality and character, may be possessed by the student to such a degree as to compensate for a slight or, in some cases, a considerable shortage of general intelligence.

Personality Tests.

In any guidance program the necessity of taking into

account those characteristics of an individual which go to make up that mythical entity variously termed his personality, character or temperament, is fully recognized. Characteristics that are assets in one situation are liabilities in another. However the process of getting an adequate picture of this phase of the student is extremely difficult. Recognition of the fallibility of unchecked judgments, as well as the necessity of finding some satisfactory method of securing a reliable measure of this aspect of the individual, has led to the development of personality rating scales. Such scales list characteristics that influence one's success or failure and are serviceable to the degree that we are able to view ourselves clearly. Unfortunately we are too often inclined to overrate or underrate our own characteristics. We cannot "see ourselves as others see us." At the same time a self-rating scale is a wholesome discipline to which to subject yourself now and then, if you do this honestly, with neither undue conceit or modesty and a sincere desire to know both your limitations and your powers. Many students have found the personality rating works of Seashore and Seashore (1935), Bennett (1935) and Roback (1934) both informative and serviceable. Sample items taken from personality tests include such questions as:

1. Are you self-conscious when you enter a room full of people?
2. Are you nervous in the dark?
3. Do you like to lead people?
4. Do you prefer working alone or with a group of fellow-

workers?

5. Do you get along well with your brothers and sisters?

6. Do you feel nervous when speaking in public?, and
so on.

It must be granted, however, that tests of personality, interesting in possibilities as they are, have not yet reached the stage of development where vocational guidance workers can obtain much help from them. Nevertheless there is a great deal of activity on the part of psychologists along this line and what the developments may be in the near future, it is unsafe to predict.

Various traits which seem to have direct bearing upon personality may be classified as physical aspects, mental traits, and capacities and abilities other than intellectual ones. Physical traits in so far as they are related to health and vigor, general appearance and personal efficiency, have an influence upon the personality of the individual. Speed and other bodily activities are important in determining how efficiently the individual will function in his environment. Mental traits also enter into personality. However, a keen intelligence does not guarantee the possessor an attractive personality. Intelligence is important in personality in proportion to the use we make of it in the direction and control of our behavior. If it provides us with knowledge and insight to understand our activities, not only in relation to ourselves but to others, and with ability to effect worth-while changes, it can facilitate the development of an

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attractive personality.

An attempt has been made in this book to designate those personality traits which are most essential and those which are most detrimental in each occupation in the hope that the student may find some type of employment suited to his own particular personality.

Vocational Aptitude Tests.

An aptitude test is a test designed to discover what potentiality an individual has for learning some particular vocation or acquiring some particular skill.

Because an individual has a general intelligence rating near the median of those who are successfully engaged in an occupation which interests him, it does not follow that he will succeed in that occupation. It may be that he lacks other qualities that are required for success in this particular work but possesses qualities that are necessary in some other occupation in which the necessary intelligence level is approximately the same. This brings us specifically to the field of aptitude tests.

Aptitude tests seek to determine to what extent the individual possesses the special qualities which make it possible to do successfully, and without undue strain, the particular functions most characteristic of the occupation. Special aptitude tests measuring mechanical ability, manual dexterity, clerical aptitudes and musical ability have already been developed. Perhaps the best known test of this type

has been developed by Carl Seashore in the field of music. Using the results obtained in this test, Seashore claims the examiner should be able to state what kind of musical training and achievement, if any, the pupil is adapted for and what is the probable extent of achievement and rate of progress.

At the present time, however, the whole question of special aptitude testing is still in the field of experiment and research. Until really reliable tests have been devised school subjects will serve as an excellent indication of special aptitudes and abilities in a great many cases. For instance if a student is considering medicine as a possible career, he should certainly take enough courses in science to find out whether he is adapted to and likes such work. Other courses may similarly serve as a test of one's real aptitude for a particular career. Since mathematics and physics, for example, are indispensable prerequisites for success in science and engineering, High School courses in these subjects offer to the student the best evaluation of his capacity for those fields.

The following is a table adapted from a list given by Williamson in his "Students and Occupations." This classification of vocations by types of abilities is suggestive of possible vocational choices for students.⁴

⁴Williamson - "Students and Occupations." PP - 32-33.

TABLE III

Types of Abilities and Related Occupations

<u>Special Abilities</u>	<u>Related Occupations</u>
(1) <u>Verbal & linguistic</u> - fluency in the use of one's own language and facility in learning other languages. Perception of verbal relations.	(1) Author, lawyer, professor, minister, editor, advertising copywriter, etc.
(2) <u>Scientific</u> - facility in defining, classifying, grasping principles, inductive reasoning, perceiving relation of rule to example.	(2) Research worker, physicist, chemist, geologist, psychologist, etc.
(3) <u>Mathematical</u> - facility with abstract symbols (and relations of cause and effect). Perception of complex number relations.	(3) Mathematics teacher, accountant, engineer, statistician, comptroller, etc.
(4) <u>Clerical & Commercial</u> - accuracy and speed in handling numbers, names systems and details.	(4) Bookkeeper, credit man, purchasing agent, cashier, clerk.
(5) <u>Constructive and Mechanical</u> - perception of spatial relations. Facility in designing, calculating, working with machinery, etc.	(5) Engineer, architect, inventor, tool maker, printer.

(6) Manual Skills - dexterity in using tools, skill with hands and fingers, precision in co-ordinating movements.

(7) Artistic - appreciation of form and color, facility in crafts and imaginative interpretations.

(8) Executive - initiative, self-reliance, ambition, leadership, etc.

(9) Social - sociability, co-operativeness, tact, personal pleasingness, helpfulness.

(10) Practical - efficiency in practical affairs, calmness, under pressure, persistence, courage.

(6) Surgeon, dentist, sculptor, artist, skilled mechanic, special skilled trades.

(7) Artist, sculptor, architect, designer, composer, actor, dancer, etc.

(8) Director, manager, foreman, inspector, etc.

(9) Politician, teacher, personnel or social welfare worker, salesman, etc.

(10) Air pilot, sea captain, army officer, surgeon, etc.

Vocational Interest Tests.

A possible avenue of approach to the question of occupational choice is through analysis of one's interests, as revealed by hobbies, by what one seems naturally to take up in his leisure time, the kind of activity he "gets the most kick out of." Not only will interest largely determine

- (1) *...*
- (2) *...*
- (3) *...*
- (4) *...*
- (5) *...*
- (6) *...*
- (7) *...*
- (8) *...*
- (9) *...*
- (10) *...*

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the amount of personal satisfaction to be derived from a career but, through their influence upon the efforts expended therein, they may also directly affect the possibilities of success.

The psychology of interests, their measurement and their importance in human adjustment, has been the subject of extensive research for a good many years but the cultural importance of interest measurement is only now becoming recognized. We have so long regarded abilities as the criterion of life's success that we have neglected the philosophy of happiness. If one is engaged in some task which holds no interest for him, he cannot hope to be nearly as happy, efficient or successful as if he were genuinely interested in his work. Interest inventories have been devised in an attempt to help overcome this difficulty.

Strong has developed interest blanks in which each item is checked in taking the test, according to "like," "indifferent," or "dislike." These tests do not measure intelligence or school work but measure the extent to which one's interests agree or disagree with those of successful men in a given profession. From the results of such a test the student may obtain some indication of the type of occupation which he would find most congenial to his tastes. Strong's test gives characteristic interest patterns for twenty-six specific occupations some of which are advertiser, lawyer, minister, teacher, accountant, salesman, chemist, architect.

In all tests of occupational interests the assumption is made that one possesses interests in a certain field of human reactions because he knows something about the field of activity. Interests are considered to be represented by knowledge or information. The person who is interested in a field is thought to absorb and retain information in that field. The amount of information, therefore, is used as the criterion for the measurement of interests.

Although interest measures are not yet perfect, the best objective measures fluctuate much less from year to year than do subjective estimates. However the use of interest blanks in vocational guidance programs requires great care and will really only have value in the hands of a trained psychologist.

Self discovery is the first and perhaps the most essential step towards self-direction in the choice of a vocation. Supplement the knowledge you may obtain of yourself from tests of intelligence, personality, interests and vocational aptitudes by ratings of yourself made by yourself as well as by others. This information should help you select the vocational field in which you would be advised to concentrate for your education and training and in which you should experience the greatest satisfaction while at work.

CHAPTER V.

AIDS TO ANALYSIS

You will recall that earlier in the book three broad factors were mentioned as being of primary importance in the wise choice of a vocation. The first involved the analysis of the individual's own equipment, his character, personality, special interests and abilities, intelligence, resources, and so on. The second involved the analysis of the various occupations, their requirements and promise at present and in the future. The third and final step involved bringing these two analyses together so that the individual could be directed towards a vocational field with some assurance of happiness and satisfaction. It is the first of these three factors, the analysis of the individual, which we wish to discuss in this chapter. There are two ways in which you may obtain a clear understanding of yourself, by means of self-analysis and by means of scientific tests, each of which will be discussed in turn.

Self Analysis.

Perhaps the best concrete illustration in the nature of specific data fundamental in self-analysis is contained in a book entitled, "The Young Man in Business," by H. L. Davis. Mr. Davis says⁵, "A self-analysis will help to determine one's strongest and weakest traits. The best way for a boy (or girl) to make this self-analysis is to ask

⁵H. L. Davis - "The Young Man in Business." P - 104.

himself a number of searching questions. If he thoroughly studies out the answers to these questions, he should gain a more detailed understanding of his own tendencies. Before starting to answer the questions, he should be convinced that successful men are not 'all-round specialists'--they are preeminent men in certain fields, but lay no claim to great knowledge or ability in many others. The reason for their outstanding success is that they are especially fitted for those activities. If any one of them had no outstandingly strong talents, he would do fairly well in many different fields, but would never rise to eminence in any one activity. If a boy (or girl) becomes convinced of this fact, he will not be unwilling to admit to himself that some of his characteristics are of less strength than others. It will be easier for him to appraise properly his own talents."

The following list of questions, if candidly answered, should aid the student in his analysis of himself:⁶

- (1) Have I thoroughly enjoyed any subjects that I have studied?
- (2) What studies have I most enjoyed?
- (3) If I did any appreciable amount of work in connection with any subject in addition to that which was required by the school, what was the reason I became so especially interested in that subject?
- (4) Are there any vocations in which the studies which interest me, are utilized?
- (5) To what extent did I buy, sell or trade with others?

⁶ Adapted from H.L. Davis - "The Young Man in Business."

(6) Was I successful in such ventures or did the boys usually get the better of the trade?

(7) What, if anything, have I built with tools?

(8) What grade of work do I do with tools; that is, do I delight in precise work, or is a loose fit satisfying to me?

(9) To what positions of responsibility have I ever been appointed by the authorities at school or other organizations with which I have been connected?

(10) As far as I can tell what influenced the authorities to appoint me in each case and why was I not appointed in each case that I desired recognition?

(11) Was I one of the recognized leaders among my fellows in school? If so, in what?

(12) Do I like to lead publicly: that is, do I like to be in the limelight, or do I prefer to plan and then to obtain the results through the active leadership of others?

(13) Am I happier to follow than to lead?

(14) Is it easy or not easy for me to get other people to do the things I want them to do?

(15) Do I give encouragement and praise to others when it is deserved?

(16) To what extent do others give me their confidence?

(17) Can people tell me things in confidence with the assurance that I will not betray their confidence to others?

(18) To what extent do others give me their loyalty?

(19) To what extent do others seek my advice?

(20) To what extent am I able to help others straighten out their difficulties and disagreements?

(21) To what extent do I incline to be helpful to other people: that is —

(a) Am I merely intellectually desirous of seeing the level of other's comforts raised or am I willing to work for this end?

(b) Do I make personal sacrifices for the direct benefit of others?

(c) Am I inclined to sacrifice my personal comfort and convenience to a considerable extent, in order to be helpful to others?

(22) Do difficulties weigh upon me: when I have done my best, do I worry over the results?

(23) Am I so sensitive that my feelings would be hurt through such things as lack of appreciation, co-operation or untrue statements made about me?

(24) Do I accept the criticism of others without being irritated by it?

(25) Do I persist against the opposition of others in trying to accomplish the objectives I think are desirable or am I easily deterred from carrying out my purposes?

(26) Am I able to suggest that others do things in different ways without antagonizing or offending them?

(27) Am I self-possessed or am I inclined to lose partial control of myself and of the situation?

(28) Do I make friends easily?

- (29) Do I like to be with people most of the time?
- (30) Am I confident and at ease in the presence of others or am I easily embarrassed?
- (31) Do I prefer to be alone in order to study out things that interest me?
- (32) Do I have difficulty in speaking before large groups of people?
- (33) When speaking to groups of people, do I hold the interest of my audience and win them to my way of thinking?
- (34) Can I express my thoughts clearly and readily either in speaking or in writing?
- (35) Do I enjoy work that involves considerable detail?
- (36) Is it necessary for me to have some one follow me up in order that I do things thoroughly, well and on time?
- (37) What features of any work I have ever done have been the most interesting to me?
- (38) What features of least interest to me?
- (39) In what way do I prefer to spend my leisure time?
- (40) Have I any especially interesting avocation?
- (41) If so what is it?
- (42) Why do I like it?
- (43) Could I develop it into my vocation?

This problem of self-analysis is not a simple matter. It should not be rushed to completion for too much depends upon the accuracy of the results. It should be spread over several days or even weeks in order that sufficient time be allowed for reasoning out the answers. Whatever time is

spent on self-analysis will be time well spent, for to what do a few days amount when one is bent on planning his whole future career?

Students who make a conscientious effort to answer these questions will learn a good deal about the nature of their own interests and capacities. However they will still need to study work opportunities in order to consider intelligently where these personal characteristics are likely to find effective realization. Most activities call for a combination of several, sometimes many traits. The person who has taken the trouble to make a conscientious, frank self-analysis should be able to utilize this evidence to advantage in his subsequent scouting of occupational fields.

CHAPTER VI.

MORE ABOUT INTERESTS

The Importance of Interests

In 1924, John Mills, a man with wide experience in the selection and training of college students for work in industry, suggested the possibility of classifying individuals in respect to their interests in:

- (1) Ideas,
- (2) People,
- (3) Things,
- (4) Monetary Symbols.

A good deal of overlapping, of course, exists in relation to such interests but in many instances it may prove helpful. Although it is extremely difficult to tell whether any given individual is most likely to succeed in some particular occupation, still, no matter what occupation he enters it is often possible to determine whether he is best adapted to working with people or with abstract ideas or with impersonal or material things. Where ever possible this approach to the question of occupational choice has been undertaken in this book.

As has already been suggested, the individual entirely uncertain about his future occupation will do well to begin by considering the things he likes to do. In succeeding pages an attempt has been made to classify occupations in the light of their most characteristic functions. An attempt has also been made to indicate where the type of activity one prefers may find scope in the different vocational fields.

The student may also benefit greatly by comparing himself with others whom he knows are successful in their own chosen field. If he can thus rate himself in respect to different sorts of activities, he is in a better position to consider the suitability of specific occupations for himself.

Crawford and Clements in their book "The Choice of an Occupation" have given a very comprehensive classification of occupations based on whether they deal primarily with ideas people or things⁷. We quote their classification almost in full:

I. Work dealing primarily with people.-

A. Dealing Directly with People.

(1) Heading the list of occupations that deal primarily with people we have the following professions:

Medicine - A calling of particular interest and importance but requiring a longer, harder, more expensive training than most others.

Ministry - The present needs and opportunities for leaders in this profession are very great.

Law - In addition to the opportunities offered within the profession itself, legal training is also of recognized value in many kinds of business. It is particularly helpful in fields demanding leadership and keen, sound analysis, as for instance finance.

⁷Crawford and Clements - "The Choice of an Occupation.

Personal Work in Industry or in Education -

This is a relatively new profession of great interest and increasing importance. The proper selection and training of individuals in order that they might develop their maximum effectiveness--in other words intelligent utilization of man-power--is a great present day problem both in industry and education.

Social Service - There is a great future and work of an absorbing nature in store for the social service worker in Canada. At present most of the openings are in the east, Quebec and Ontario.

Teaching -

While some of these professions offer less in the way of financial returns than do others, they also offer compensating advantages. Briefly some of these are, contacts with growing youth, spiritual satisfaction, opportunity for travel, interesting work and especially intellectual stimulation.

(2) Business - In business the type of activity which deals directly with people finds its most important outlets in management and selling.

Management - This is the natural aim of a great many men entering business. A large part of the success in this line is dependent upon the ability to influence decisions. Overcoming the resistance

of others and inducing them to accept suggestions requires both leadership and salesmanship.

Generally it is the so-called "selling qualities" of personality, ease of expression, and ability to influence others, which characterise the successful industrial or professional leader in any field. If a man shrinks instinctively from the idea of salesmanship, if he is sensitive to rebuff and suggestible rather than persuasive, the chances are against his becoming a dominant figure in any phase of industrial management.

Selling - The importance of distribution and marketing is so great in the present economic organization that selling in some form offers promising opportunities for advancement in many branches of business.

B. Dealing Indirectly with People. - through promoting and forming policies for others to follow, influencing groups, public opinion, etc., Such activity you see would take the form of:

Advertising - The importance of which is becoming daily more apparent as witnessed in newspapers, magazines, billboards and so on.

Journalism - This will ever constitute a very important phase of modern civilization.

Public Relations - work in certain phases of business and government.

Social Investigation - and its applications.

Certain phases of education - as administration, public relations, investigations, etc.

II. Work dealing primarily with Ideas.-

Ideas of course are the basis of progress and expansion in almost any calling. The higher the position one holds, the more it is necessary to develop new ideas and then to win their acceptance by others. However we may list under this heading such work as:

Invention

Experimental, industrial and scholarly research

Many phases of pure science and pure engineering

Artistic and Creative professions, i.e.,

Architecture,

The Five Arts: Painting, Sculpture,

Music, Creative literature, Design,

artistic and commercial,

Drama - playwriting, acting, technical production.

III. Work dealing primarily with Things.-

A. Working with the thing itself - producing, handling, shaping materials. Work dealing primarily with things may be found in:

Agriculture

Forestry

Certain types of laboratory work, as in medical or other scientific research.

Various kinds of engineering and construction

The technical or productive side of manufacturing.

Development of natural resources.

The operating phases of transportation

Skilled and Semi-skilled trades.

B. Working with the Symbols of Things - dealing with things in the abstract. This would lead to:

Accounting

Statistical analysis in professional, industrial, or financial fields.

Certain forms of research

Drafting and Designing

Credit work

Buying end of investment banking

Actuarial Insurance work

C. Work dealing with Commercial Exchange and the Impersonal Distribution of Things. A certain type of business acumen or shrewdness is important in this field. Such work may for instance involve:

Newspaper and direct mail advertising

The retail store

The departmental store

The chain store and mail order house

Purchasing

Trading companies, domestic and foreign

By means of various methods we have mentioned as aids in self-analysis together with the study of occupational literature, the student should be able to ascertain the

particular kind of activity for which he has a preference. As a result of his school experience, he also should have a reasonably good idea of his own mental endowments and talents-- that is, whether he is best at mathematical or scientific analysis, or verbal expression, whether he possesses mechanical ingenuity or is artistically creative. His objective then should be to decide upon a type of activity which will utilize his talent in an occupation which he will find congenial.

Work which combines these advantages for the individual should stimulate and interest him so that his day to day activities will seem worth doing for their own sake and not merely as a necessity for subsistence. Employment, which, on the other hand, does not tap a reservoir of interest, is likely to prove neither satisfying in itself, nor a medium of successful accomplishment in any sense.

CHAPTER VII.

HOW TO STUDY.

Waste in Studying

Since studying is perhaps the most important phase of school life it would seem worth while to make a few suggestions which will assist pupils in their work. It may seem a little ridiculous to give advice about something concerning which each pupil is presumably proficient after years of practice in it and yet it is certain that there is an incalculated waste of energy and a still greater waste of time in so-called studying. Under favorable conditions of work and by developing more economical methods and habits of study, the average student could accomplish his work, just as efficiently and more efficiently in two-thirds or less, of the time ordinarily consumed. Besides, vicious habits of dawdling in school work are acquired which may have their permanent effect throughout the individual's entire life.

Every subject has its own special material and presents its own problems on how to study effectively so that it may seem futile to attempt to give general advice on how to study. Yet upon further analysis, it appears that there are several elements common to all learning. Briefly these elements are:

1. The control of attention.
2. Common principles in the actual learning and retention of the material.
3. Proficiency in reading.

Control of Attention

Perhaps the chief sources of waste in studying are the reluctance to begin a mental task and the inability to keep the attention concentrated on the job at hand. In order to overcome the first difficulty the student will just have to train himself to grit his teeth and "go to it." In respect to the second, almost everyone has found it difficult at some time or another to concentrate for work. Time and time again you have probably caught yourself thinking "Oh, what's the use. I can't keep my mind on my work." In this section we shall consider the factors which interfere with concentrated attention and suggest some methods of how to deal with these disturbers of the attention.

First of all see that you are in the proper physical and bodily attitude for work. Concentration is impossible when hunger, thirst, undue warmth or cold intrude into one's activities and cause discomfort. The effect of atmospheric conditions on work has been thoroughly studied by the eminent psychologist, Thorndike. He found that high temperature and relatively high humidity are the principle causes of discomfort. Optimum conditions for work are considered to be temperature of 68° Fahrenheit and 50% relative humidity.

Careful consideration must also be given the question of lighting. Illumination for regular work and study is more satisfactory when it is of a moderate intensity and there is an evenness of distribution. The tendency is to have a light too intense rather than too dim. Studying in the small circle

of light provided by a student's lamp is very harmful to the eyes. There is a constant strain on the muscles of the eyes whenever they are raised to meet the relative gloom beyond the small area of illumination. If you wish to study with the additional aid of a lamp the whole room should be lighted sufficiently to avoid eye strain. Lighting, important as it is for accurate, efficient, work is woefully neglected. Every effort should be made to lessen eye strain. Tired eyes interrupt the continuity of work and defeat the best intentions to concentrate.

Always work in surroundings in which there are as few distractions as possible. Some persons can work under very distracting conditions, but these are exceptions and if one has difficulty in beginning work, he should go alone into a separate room, shut the door and sit facing away from the windows, and have nothing to look at or distract his attention. The removal of distractions, or what amount to the same thing, the selection of a place for study where there are no distractions, is one of the most useful suggestions that anyone can adopt for developing concentration in work. The average pupil wastes an inestimable amount of time by having to study in the presence of other members of the family who may be conversing or moving about and every word and action is bound to divert the attention. Only those persons who have compared their own working efficiency under distracting conditions with their efficiency under ideal conditions can appreciate the enormous difference in the amount that

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can be accomplished.

Begin work at once. Do not continue to think "Oh I just hate doing algebra" or "I don't see why I should have to study this anyway." Instead go to your room, sit down, take hold of your book, pencil and paper and go through the motions of work at least. This will automatically start the mental processes going and before you know it you will be attacking the problem at hand in a really interested manner. Business like methods in the use of time are very important for efficiency. Try such schemes as having a definite schedule of study, setting yourself a time limit for the work at hand, dividing the number of pages so you can tell how much you have read or studied every fifteen minutes, copying a sentence which helps to keep the mind on the subject. Be actively concerned with studying; compete with yourself in establishing superior habits. Don't hesitate to select a competitor in a fellow student whom you wish to excel, but show wisdom in selecting someone whose abilities are not too much beyond your own.

Common Elements in the Assimilation and Retention of the Material

Here also five or six specific suggestions applicable to any kind of studying may be given. Psychologists advise us to:

1. Take a "problem-solving attitude." By this they simply mean know definitely what you want to find or what you wish to achieve by your studying, ask yourself

questions and then look for the answers just as if you were a detective trying to solve some baffling problem.

2. Understand what you want to learn and retain.

Actual investigations have shown that trying to learn or memorize ideas blindly takes ever so much longer and although you may spend more time on your lessons you will not remember them nearly as well as if you had taken the time to understand them before you attempted the task of memorization.

3. Recall at frequent intervals the essential ideas of what you have read. Stop at the end of each paragraph or so, shut your eyes and repeat to yourself the essential ideas. Say to yourself "What did I read about," Then try to answer the question.

4. Keep reviewing at short intervals the larger essentials of all the material covered up to date. Such a review need not involve details. Its chief purpose is to give you a general outline of the course and help you organize your material into its proper sequence. Some students find the preparation of a summary or outline of central ideas very helpful especially as examination time draws near.

5. Use every new idea you have acquired at the earliest possible moment and as frequently as possible, either by telling it to some one else, or by thinking it over in your own mind.

Some Facts on Memory and Forgetting.

Individuals differ greatly in their ability to retain. The differences are due in part to innate powers of retention. Native retentive power is not under our control, but the use which is to be made of this potentiality is within our control. Always be on the alert for suggestions which will help you make the most of whatever retentive power you may have. Here are a few recommendations:

1. In committing to memory, it is better to read aloud than to read silently, and better to read rapidly than slowly. The following table gives the results obtained from an actual investigation and shows quite definitely that the greater the amount of time devoted to self recitation, the greater the percentage of material remembered.

TABLE IV.

Recitation vs. Re-reading⁸

5 Biographies - Total of 170 words, 70 remembered.		
<u>Material Studied</u>	<u>Immediately</u>	<u>After 4 hours</u>
All the time devoted to reading	35	16
1/5 of the time devoted to recitation	37	19
2/5 of the time devoted to recitation	41	25
3/5 of the time devoted to recitation	42	26
4/5 of the time devoted to recitation	42	26

⁸ From Gates on Reading (1933) - P 349.

the following table is given:

TABLE I. — *Summary of the results of the experiments.*

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TABLE I. — *Summary of the results of the experiments.*

REFERENCES

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3. <i>General references.</i>	3. <i>General references.</i>	1916
4. <i>General references.</i>	4. <i>General references.</i>	1917
5. <i>General references.</i>	5. <i>General references.</i>	1918
6. <i>General references.</i>	6. <i>General references.</i>	1919
7. <i>General references.</i>	7. <i>General references.</i>	1920
8. <i>General references.</i>	8. <i>General references.</i>	1921
9. <i>General references.</i>	9. <i>General references.</i>	1922
10. <i>General references.</i>	10. <i>General references.</i>	1923

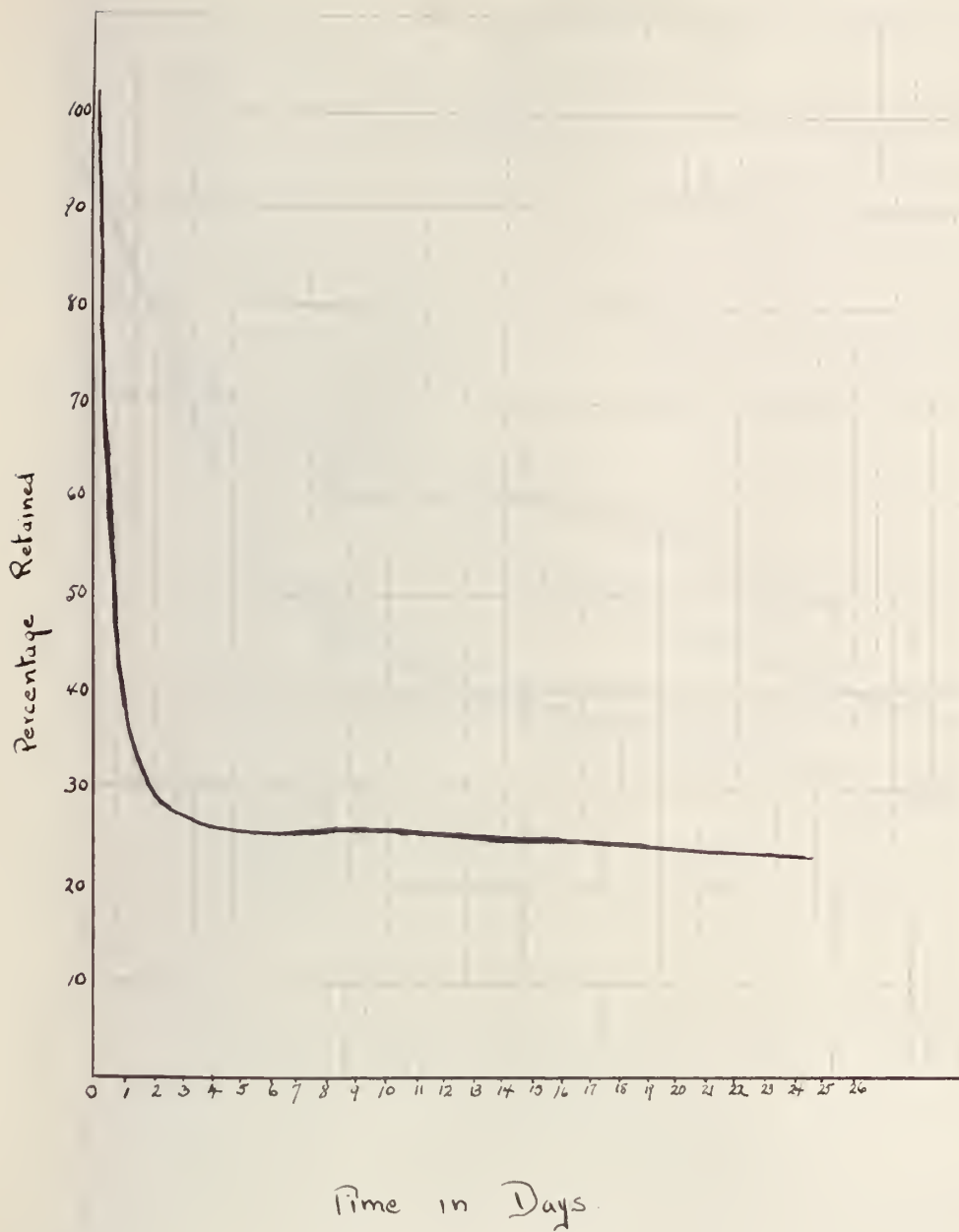
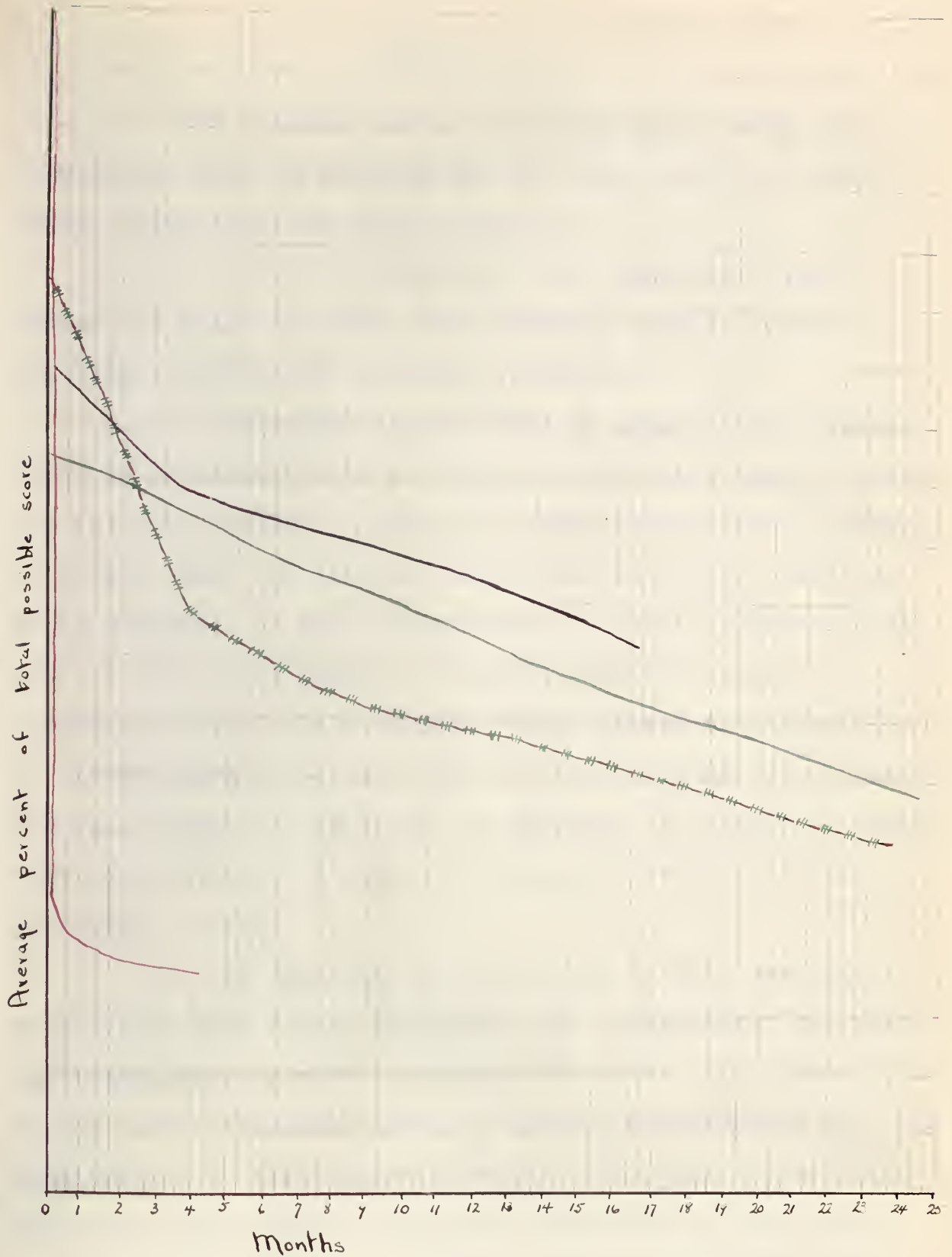


Fig. 2 - Ebbinghaus's Curve of Forgetting (Senseless material).



The graph illustrates the relationship between the variable on the y-axis and time on the x-axis. The initial slow growth phase is followed by a period of rapid increase, which eventually leads to a slight decline. This pattern is typical of many natural and social processes that exhibit a lag phase before entering a growth phase.



Legend

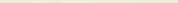
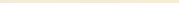
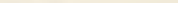
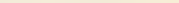
Parade school history -		College zoology -	
High school chemistry -		Meaningless material -	

Fig 3- Retention curve for school subjects (meaningful material)

This evidence should encourage one to adopt the more active form of learning and the more effective study habits resulting from self-recitation.

2. Carry the learning of all important items beyond the point necessary for immediate recall. Over-learning is conducive to better retention.

3. In committing material to memory it has been shown to be advisable to learn by wholes rather than by parts. One point of caution in using the whole method should, however, be noted. When the learner reads over the entire selection to be memorized he does not make much visible progress until, after a sufficient number of repetitions, he is able to reproduce most of the material. This situation is likely to be discouraging so perhaps the most effective way of applying the whole method is to learn the material in relatively large sections instead of a complete whole, particularly if the selection is long.

4. An important point to note is that meaningful material is more slowly forgotten than unmeaningful material. The accompanying graphs illustrate the point. In Figure 2, A is the curve Ebbinghaus obtained when he experimented with the memorization of meaningless material. You will notice that the curve drops rapidly during the first two or three days and then tapers off more gradually. This shows that the greatest amount of forgetting occurs soon after learning and that less and less occurs in the succeeding periods.

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In Figure 3⁹, we have retention curves for school subjects 16 to 28 months after the end of the course. You will notice that in this case the curves all have the same general trend as A but they do not drop off as rapidly nor do they even reach the low level of A. Notice too that in the case of the meaningful material the amount of retention is measured over a period of months while in the case of the meaningless material it is measured only over a period of days.

5. Since the greatest amount of forgetting occurs soon after learning, it is very helpful to review learned material early. A profitable suggestion is to review class work briefly the next day after it is learned.

The cause of forgetting has often been considered as a function of time, but time in itself is not the chief factor. Intervening activities, between time of the learning experience and time of the recall are known to inhibit retention and thus cause forgetting. This intervening time when filled with some definite activity will aid forgetting more quickly than time spent passively. If the intervening work is entirely different, forgetting will not be as marked as if the work were similar; for instance it would be much better to study Latin and then Algebra than Latin and then French.

When rest in the form of sleep intervenes between learning and recall, there is much less forgetting. It is

⁹From S. L. Pressey - (1933) P. 400.

usually true that what you learn in the evening is remembered better in the morning than what you learned in the morning can be remembered at night. This fact has a decided practical application in all school work. Forgetting is not so much the decay of previously learned material, as the interference or obliteration of the old by the new. When the student knows something about this "retroactive inhibition," which is the technical name given it by psychologists, and follows these few rules that have been given in order to avoid it, the retroactive effect will be greatly reduced.

Improvement in Reading Ability.

The lack of reading efficiency and its resulting handicaps has been found to be one of the major problems in effective study. The average student reads far too slowly; far more slowly than he is capable of reading. About one quarter of University students read less rapidly than the average eighth grade pupil does, and about one quarter of the eighth grade pupils read less rapidly than the average fifth grade pupil. Experiments indicate that by a moderate amount of definite practice and with conscious effort to improve, the speed of reading may be advanced from 50% to 100% without loss in the comprehension of the ideas read. Several important suggestions may be offered for improvement in reading ability:

1. In respect to the speed of reading.- Force yourself to read more rapidly. Perhaps the most effective

way to improve your speed in reading is to actually time yourself. See how long it takes you to read a printed page and then make a conscious effort to improve upon your rate. There are well-authenticated cases where the rate of reading light literature, such as novels, has been increased by conscious practice from 30 pages to 120 pages per hour, without any measurable loss of comprehension or retention. Naturally however, your rate of reading will vary with your purpose, reading for knowledge takes much longer than reading for pleasure.

2. In respect to the comprehension of reading.-

(a) Stop frequently to recall the essential ideas read. Ask yourself the questions, "What have I really read? What are the essential ideas?" Such a procedure will not only stimulate reading for comprehension but will also help to fix the essential ideas in the mind.

(b) Acquire the habit of looking for and singling out for special attention the essential ideas.

(c) Make it a habit to read through a topic or a book quickly to get a general idea of its context, then re-read slowly and thoughtfully. Do not hesitate to mark up your books to make the essential ideas stand out visibly.

(d) Always keep a dictionary on your desk and use it not only to look up new words but also familiar words used in a somewhat unusual context.

Do Grades Count?

Students with failing or mediocre grades often excuse their indolence by saying "Grades don't mean anything when you get a job. After leaving school a person actually gets to work." The question is, do students really reform and become industrious or do habits persist? The relationship between quality of school work and vocational success in one corporation is shown by the following chart. Figure 4¹⁰ shows, for college graduates in the Bell Telephone System, the median salaries for groups of college graduates classified according to scholarship. The relation between the quality of academic work and income is represented graphically. Apparently the same factors which made for success in college work, that is, excellent abilities and keen interest persistently and efficiently applied, are those which make for success in economic competition. The inescapable inference to be drawn here, then, is that marks do mean something for success after school work.

¹⁰From "Students and Occupations" - E. G. Williamson.

CHAPTER VIII.

HOW TO GET A POSITION

Some experiences which hundreds of graduates have had in obtaining their first employment, and the experience of employers who directly contact these young people, are brought together in the following paragraphs. Certain principles have become crystallized which may serve as a guide for the novice.

The various avenues through which one obtains positions are usually,

- (1) friends, relatives and acquaintances,
- (2) letters or visits to the firms or company,
- (3) advertisements for help wanted,
- (4) employment agencies,
- (5) general notices of new business enterprises.

A question was included in the questionnaire asking to whom the individual would submit his application or to whom he would go for a personal interview. Whenever a definite answer to this question was received you will find the information under the write-up of the specific occupation.

As part of the campaign in the search for a position, prepare a list of all the possible firms, companies or organizations which you are desirous of entering. Learn all you can about these companies, their policies, how they treat their employees, if there will be opportunities for advancement, special advantages and disadvantages, and so on. The next step is to secure the name of someone in the company to whom you might go directly and arrange an appointment.

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The Personal Interview

An interview might be more successful for many individuals if certain appropriate principles are known and applied. Personal appearance cannot be stressed too much as the most important factor in determining the nature of the first impression. Young men and young women must take care to be well-groomed and appropriately dressed for the occasion. Clothes should be neat and business-like, all linen fresh and clean, shoes polished. Care in such details will give you a feeling of self-confidence which will have a sound effect upon your conduct during the interview. Never permit a parent or friend to accompany you to an interview.

All these points just mentioned must be taken care of before the actual interview begins but now let's discuss a few points essential to the interview itself. The more you prepare for the interview the more poise and self-control you will display. Do not talk too much, remember the interview is a conversation with a purpose and present the necessary information in a concise and clearly thought-out form. Do not show off or appear boastful about your accomplishments rather convey the feeling of interest and enthusiasm for the work which you are seeking. Remember that you are an applicant for a position and not favoring the company by accepting the position it may offer you. Avoid over-familiarity of any type, in fact it is far better to err in the opposite direction. Whether or not a position is offered you, if the employer has expressed any interest in your ambitions ask him

if he will advise you where to go for the work which you wish to begin, or what would be your next move.

Letters of Application

When letters of application are necessary they need to be prepared with the greatest care. They serve as your representative, so be sure they do you credit. Do not be afraid to ask a competent and experienced person for help in the organization of such a letter, and for continual criticism until it is exactly right as to form and appearance, English, spelling, stationery, proportionate space given to necessary topics and so forth. The following items of information are usually requested, address and telephone number, date and place of birth, religious preference, race, health, education, special qualifications, employment record and references. When at last you are satisfied with your letter, copies should be sent out to all your selected list of employers.

CHAPTER IX.

HOW TO HOLD A POSITION.

Once one has obtained a position then he seeks not only to hold it but to gain advancement. However, in no occupation does advancement come as periodically as it does in school. It may take all the courage and energy you can muster to perform the humdrum tasks of the daily routine but it is the manner in which you execute these tasks that will mark you for advancement. Not only the ability to learn the fundamentals of each step, but patience in continuing to perform functions already learned, is often a primary consideration of advancement. Anyone who does his work well and thoroughly must face routine with a sense of responsibility and sheer drudgery without complaint. These are the least exciting and attractive phases of all types of work but in every field they are nevertheless far too important to be neglected. They seem, however, much more burdensome to a man whose work is but a means to an end than they are to the one who is following his own bent and enthusiasm. Probably two of the qualities most important for occupational success are those of patience, and a sense of responsibility, even for seemingly unimportant details. If one enters a field for which he is suited, however, he should find it very much easier to accept dull duties cheerfully and perform them well.

Try to think of your work as an opportunity for service, put your heart and soul into it, be on the job before time every morning, show an interest in your co-workers, be

co-operative, have initiative and courage, accept responsibility and wait patiently for an opportunity to come. Study the business or industry in which you are employed, trying to develop ideas or suggestions which will be of practical value to the company. Employ every expedient at your command to lift yourself out of the indifferent group of employees who have no interest in the company except to draw their pay. An employer is always on the lookout for persons who can be advanced when the opportunity arises and these worthwhile suggestions, if followed, will do a great deal to bring you before the employer's notice and help you win his approval.

Davies (1931) tells of an investigation in which a large number of engineers was asked to answer this question: "What are the most important factors in determining probable success or failure in engineering?" From 1500 replies, personal qualities were mentioned seven times as frequently as the knowledge of engineering science and technique of practice. Similar results would probably hold true for all occupations. In whatever line of work he be engaged the individual possessing such traits as integrity, responsibility, resourcefulness, initiative, common sense, perspective, thoroughness, accuracy and industry, is bound to be recognized and singled out for advancement.

CHAPTER X .

THE VOCATIONAL TRAINING OF ATYPICAL INDIVIDUALS.

Vocational guidance and vocational training is a service that should be extended to all children. In Alberta special provision is made for the blind and the hard-of-hearing. The following tables show where the particular schools are located, the number of students from Alberta attending each, and the cost per year per pupil.

TABLE V

Schools for the Deaf.

Location	No. from Alberta	Cost per pupil per year.
Vancouver School for Blind and Deaf	3	\$425.00
Manitoba School for the Deaf (Winnipeg)	62	500.00
Montreal School for the Deaf	6	300.00

TABLE VI.

Schools for the Blind.

Location	No. from Alberta	Cost per pupil per year.
Vancouver School for Blind and Deaf	3	\$425.00
Ontario School for the Blind (Brantford)	19	300.00
Montreal School for the Blind	1	300.00

In respect to the cost it is to be noted that the

government pays tuition and maintenance at these schools and where necessary transportation to and from the school. The parents are, of course, expected to take care of the child's clothing during the year and also to pay any incidental expenses incurred, including hospital accounts.

Nature of the Instruction for the Deaf.

Children attending the schools for the deaf are given a thorough general education and in addition they receive definite vocational instruction. Pupils are taught in both oral and manual classes. The policy usually pursued is to place all new pupils with oral teachers for the first year in school. These are taught by means of speech and lip reading. The manual classes are for those who do not respond readily to oral instruction. Their education is carried on by means of writing and finger spelling.

Occupations taught as gainful occupations in the various Canadian schools for the deaf, in classes with adequate equipment and qualified instructors, are listed below:

Trades and Industries;- Auto Mechanics,

Baking,

Bookbinding,

Ceramics,

Cleaning and pressing,

Dressmaking,

Electrical Servicing,

All phases of the printing trade,

Laundrying,

Shoe repairing,
Harness making,
Mattress making,
Metal work,
Millinery,
Power machine operating,
Sign painting and lettering,
Tailoring,
Upholstering,
Woodwork,

Agriculture.-

Dairying,
Farming,
Floriculture,
Gardening (Fruit and Truck)
Poultry Culture.

Commercial Work.-

Bookkeeping,
Business machine operation,
Filing,
Shorthand,
Typewriting.

Home Crafts.-

Needlework,
Clothing and related arts,
Foods and related sciences,
Household economics.

Semi-Professional.-

Barbering,
Commercial Art,
Drafting,
Architectural and mechanical drawing,
Cosmetology.

Vocational Handicrafts.-

Chair caning,
Fancy leather work,
Fibre cord weaving,
Flower making,
Lace making,
Lamp shade making,
Rug weaving.

Nature of the Instruction for the Blind.

One of the greatest obstacles welfare workers encounter is the erroneous view that blind people, by reason of their blindness, are destined to a sedentary life wholly dependent upon their families.

Today there are a number of schools for the blind throughout the Dominion, which, without exception, follow the curriculum set by the Department of Education of the various provinces in which the schools are located. As a result the blind child has absolutely the same educational opportunities as the sighted pupil.

In addition to academic training organ, piano,

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instrumental and vocal music is taught. For those pupils not musically inclined other vocations are taught such as piano tuning and repairing, mat and basket making, chair caning and simple carpentry. During the last few years greater attention has been paid to the training of blind students along industrial and business lines. For those intending to embark on a business career, typewriting and general business are taught. There are actually over 160 blind men and women in Canada employed in various industries and offices, not to mention concessions stands, of which there are at the present time over two hundred and fifty in Canada. Each prospective concession stand operator is given a course in practical business so that he will be able to manage his stand satisfactorily.

For the rural dweller some of the schools provide a department of agriculture which trains blind boys and girls to be efficient poultry raisers and bee keepers. There are at least three blind poultry farmers in Alberta all operating very successful businesses.

The Canadian National Institute for the blind also employs home teachers--sightless persons specially trained to teach blind people who have lost their vision after school age, and also those of pre-school age, By this means the pre-school child is taught to be self-reliant and is more or less prepared for his school life.

In the industrial centres the Canadian Institute for the blind endeavors to find employment for sightless people in factories where work of a repetitive nature is to

be secured. There have been a few openings of this type in Alberta but more opportunities will be available as employers are made to realize that a blind person can compete very efficiently with a sighted co-worker.

The foregoing touches only very briefly the fields of employment open to the blind. Vocational opportunities are growing year by year and the world is now beginning to learn that blindness does not necessarily destine a man or woman to a life of hopeless dependence, but rather to a normal, useful, happy one.

The group of individuals commonly known as atypical, includes besides the deaf and the blind, the physically handicapped, the gifted and the mentally retarded. As yet very little has been done in Alberta in the way of special training for the last three groups mentioned.

In many sections of the country it has been found that the physically handicapped can be trained and educated in such a way that they may do useful tasks for society and in so doing lead happier lives. Training in such schools is usually twofold. Regular academic courses are offered along with types of industrial work adapted to the physical abilities of each pupil.

Gifted children too, require special educational opportunities. It is to be hoped that in the very near future Alberta will follow the lead of the United States in this respect.

A small beginning to teach the mentally retarded has been made in Alberta. In the few classes which have been organized for this purpose, health, citizenship and manual work are emphasized. Work of the more academic type is naturally reduced to a minimum.

CHAPTER XI.

Summary, Evaluation and Criticism.

It should be apparent from the preceding chapters that a student who wishes to make a satisfactory vocational choice should follow the precept urged by Socrates: "Know thyself." This means knowing what sort of a mentality one possesses, how well one can work with mathematical symbols, numbers, machines, ideas, words, and how effectively one can use these aptitudes in occupational training. One must judge abilities without prejudice. One must sample aptitudes through measurement and try-out. The knowledge thus gained is most efficiently interpreted through consultation with competent advisers. For this reason it is believed that one serious omission from this thesis, is a detailed outline of methodology for professional workers in the field of vocational guidance. This defect should be corrected by future investigators.

It is revealing no professional secret to admit that present day diagnosis of aptitudes in guidance is less than perfect. In this respect guidance differs but little from other professions; even doctors have been known to diagnose physical illness incorrectly, but society does not for that reason reject modern medicine for ancient witchcraft. In the making of a vocational choice the mere desire to be successful and the use of wishful thinking are definitely more liable to error than is the diagnosis of a competent

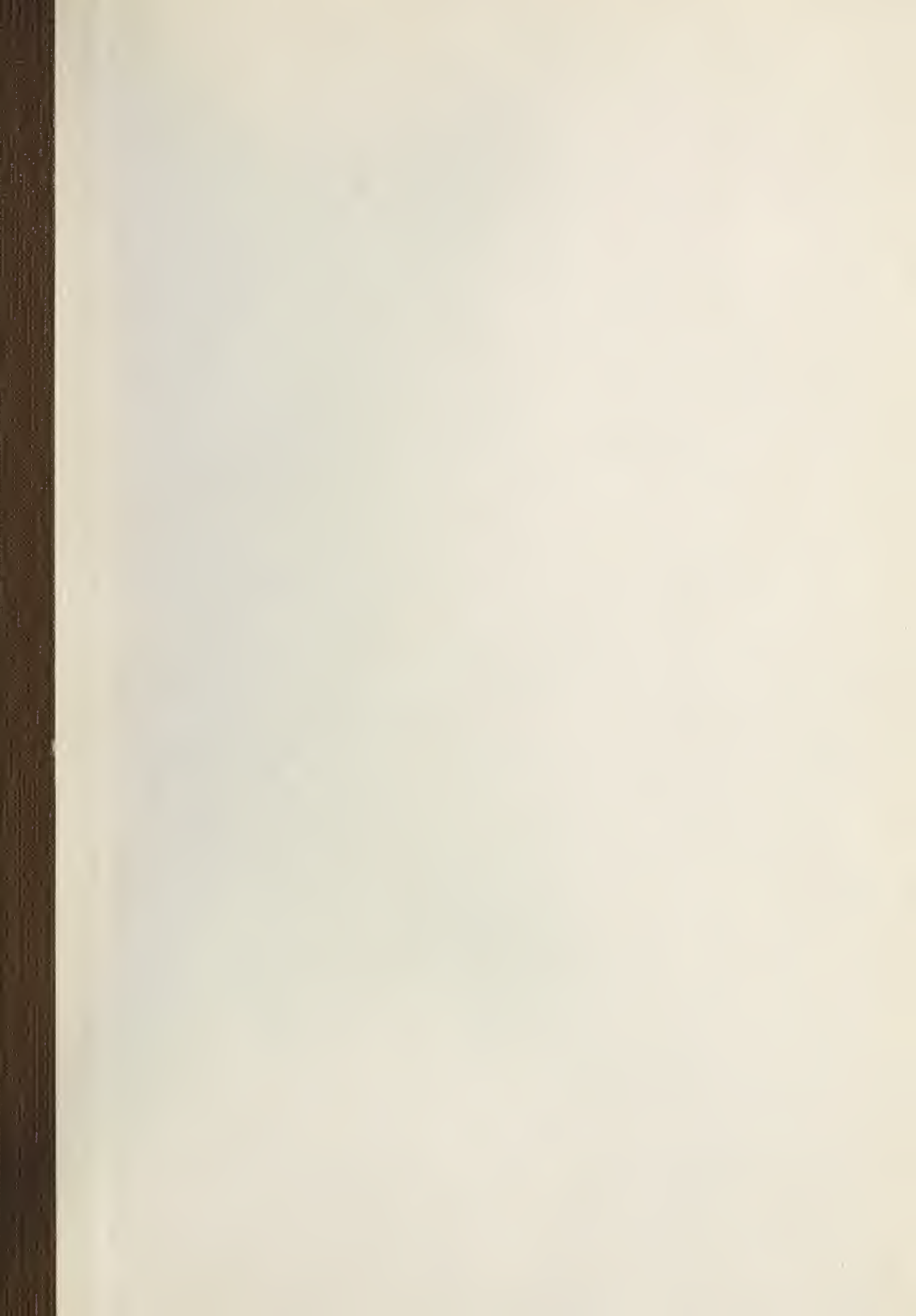
guidance worker. Thus we have tried to emphasize once more the necessity of forsaking irrational bases for vocational selection.

Because of the desire and need for all students to plan their futures with a view to the permanency of opportunities for employment in a given field it is felt that some material should have been presented which attempted to forecast from present facts the future trends of fields of work. Questions directed towards such forecasting were included in the questionnaire printed in full in Chapter II of this work. The results obtained, however, were, in all probability, the mere statements of opinions and therefore invalid. A more objective attempt to predict future occupational trends would be highly desirable if the investigation were being repeated.

As this work draws to its conclusion a final criticism calls for attention. It is the belief of the writer that a very serious shortcoming lies in the fact that not sufficient emphasis has been given to the value of education as a general background. Although this is an age of specialization, nevertheless over-specific, detailed training in one particular branch of work at the expense of all others is not to be advised. Versatility is to be cultivated and general background of knowledge should be acquired. It is important that the professional

or business man should be able to express ideas in both writing and speech, and be able to meet social situations skilfully. The demands of the public upon business and professional services are constantly fluctuating, so that the versatile individual who can adapt his capacities to different tasks has the greater chance for occupational success.

It is no less important that the student should train for versatility and enjoyment outside of his occupation. The decrease in working hours has provided new opportunities for doing useful and enjoyable things for which there used to be little or no time. Students must be given some training in the use of their leisure time, not for professional advancement, but for self-satisfaction, for co-operation in a democracy, and for intelligent participation in economic, social and political activities.



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